

CLAIMS:

1. A spray bar having a nested pair of tubes, namely an inner tube and an outer tube, there being at least one aperture through the wall of the inner tube and a corresponding aperture in the wall of the outer tube arranged such that the inner tube aperture and the
5 outer tube aperture can be caused to align, a spray nozzle mounted on the outer wall of the outer tube in communication with the aperture of the outer tube, the interior of the inner tube providing, in use, a pathway for a fluid, and an actuator means arranged to cause the inner tube to move relative to the outer tube thereby causing the apertures in the inner and outer tubes to move into and out of alignment.
- 10 2. A spray bar as claimed in claim 1, wherein the inner and outer tubes have multiple corresponding apertures spaced along their respective lengths, with a spray nozzle associated with each aperture in the outer tube.
3. A spray bar as claimed in claim 2, further including a return pathway for fluid that does not pass out through the spray nozzles in use, enabling the fluid to circulate.
- 15 4. A spray bar as claimed in either claim 2 or claim 3, wherein the apertures in the outer tube are substantially the same size and shape, and are substantially equi-spaced in a common axial plane along the length of the spray bar.
5. A spray bar as claimed in either claim 2 or claim 3, wherein the apertures are of various sizes and shapes.
- 20 6. A spray bar as claimed in claim 5, wherein the apertures are located in different axial planes.
7. A spray bar having an inner tube through which a fluid can pass, said inner tube having at least one aperture in the wall thereof, a rotor mounted on said inner tube at said aperture, said rotor having a port extending radially from said aperture to the outer
25 circumference of said rotor, said rotor being rotationally fixed onto the first tube, an annular stator having an internal configuration substantially corresponding to the outer circumference of the rotor so as to receive and engage with said rotor, said stator having a port extending radially outwardly from its inner circumference to its outer circumference, said stator port being capable of alignment with the rotor port, an outer
30 tube surrounding said stator and being fixed thereto coaxially with the inner tube, said outer tube having an aperture therethrough in alignment with said stator port, a spray nozzle attached to the outer tube in alignment with the stator port so that in use a fluid

can pass through, and an actuator to rotate the first tube relative to the second tube thereby moving the rotor port and the stator port into and out of alignment.

8. A spray bar as claimed in claim 7, wherein there are multiple spray nozzles and corresponding rotor and stator ports disposed along the length of the spray bar.

5 9. A spray bar as claimed in claim 8, wherein the rotors are keyed to the first tube to prevent rotation, but are substantially free floating along the length of the first tube, axially located via spring means.

10 10. A spray bar as claimed in any one of claims 7 to 9, wherein the outer periphery of the rotor and the inner face of the stator are conical, and the spring means is configured and arranged to pressure the rotor and the stator into engagement.

11. A spray bar as claimed in any one of claims 7 to 10, wherein the stators do not occupy the entire cross section of the outer tube, thereby providing a return flow path for unused fluid back along the length of the second tube.

15 12. A spray bar as claimed in any one of claims 7 to 11, wherein one or more stator and rotor combinations have two or more ports, either offset radially, or offset longitudinally.

20 13. A spray bar as claimed in any one of claims 8 to 12, wherein the spray bar has multiple rotor/stator combinations, with some rotors having different port configurations than other rotors such that partial rotation of the inner tube can bring some of the rotor ports out of alignment with their corresponding stator port, but other rotor ports will remain in alignment with their corresponding stator ports.